

PLUMAGE CHANGES IN THE WANDERING ALBATROSS

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The Wandering Albatross (*Diomedea exulans*) is noteworthy among birds of the petrel group for the very considerable developmental changes which take place in the plumage from the juvenile to the aged adult. In former times two species were thought to exist—the Wandering Albatross (*D. exulans*) and the so-called Snowy Albatross (*D. chionoptera*) and this arrangement was followed as recently as 1946 by the late Gregory Mathews in his *Working List of Australian Birds* (p. 12). A summary of the varying opinions held by ornithologists, with a statement of some of the difficulties attendant on observing these birds at sea, is given by D. L. Serventy (*The Emu*, vol. 35, 1935, p. 29).

It is now almost universally recognised that the "Snowy Albatross" is merely the final plumage phase of the Wandering Albatross but a full study of the developmental stages has not yet been made and it is not certainly known how many years elapse before the "Snowy" phase is finally assumed. However many authors have made contributions towards settling the problem, including L. Harrison Mathews, who published sketches from living birds studied at South Georgia (*Discovery Reports*, vol. 1, 1929, p. 569); W. B. Alexander (*Birds of the Ocean*, 1928, p. 4); R. C. Murphy (*Oceanic Birds of South America*, vol. 1, 1936, p. 548); Mark Taylor (*Western Australian Naturalist*, vol. 1, 1948, p. 99) and C. A. Fleming (*The Emu*, vol. 49, 1950, p. 174, Fig. 2).

Museums are still ill-provided with series of the developmental stages and unfortunately the conventional way in which study skins are prepared, with the wings folded against the body, somewhat militates against their effective examination for this purpose. It would be desirable, therefore, to have photographs taken of each specimen, with the outspread wings, before the specimen is skinned. This practice was adopted by the Western Australian Museum in 1945 when it received three specimens of this albatross taken in local waters. The photographs, taken by Mr. S. Fowler, of the then Council for Scientific and Industrial Research, are reproduced herewith.

One of the birds, a female (W.A. Museum Coll. no. A 6133) was found dead on the Leighton beach on July 30, 1945, and the other two (nos. A 6134 and A 6135), were collected for the Museum by the late E. A. Akerstrom on July 31, between Swanbourne and Rottneest Island, during the "Isobel" fisheries survey by the C.S.I.R. The following particulars of each were recorded by Mr. G. P. Whitley immediately after collection. Specimen A 6135 (top of plate); a male; beak dull cream; eyelids dirty whitish with trace of blue below; feet very pale grey; no pink on cheeks; wing spread 10 feet 2 inches. Specimen A 6134 (middle figure of plate); a female; beak fleshy white tinged pinkish superiorly; eyelids very pale blue; feet very light bluish or a pearly grey; a small pink area behind cheeks on each side; wing spread 9 feet 3 inches. On the



Fig. 1.—Dorsal views of Wandering Albatrosses; A 6135 (top figure), A 6134 (middle figure) and A 6133 (bottom figure).



Fig. 2.—Ventral views of Wandering Albatrosses; A 6135 (top figure), A 6134 (middle figure) and A 6133 (bottom figure).

—Photos S. Fowler.

following day it was found that in both specimens the colour of the eyelids had altered to reddish.

The third bird. (no. A 6133), a female, the oldest of the series, had a wing span of 9 feet 8 inches.

The following comparisons may be made with two recent, fairly detailed attempts at age criteria in the Wandering Albatross:

Mark Taylor	C. A. Fleming (ibid, Fig. 2)	Photographs
1st year, brown plumage, white head.	A, B, Fledgling plumage.	A 6135 (top figure.)
2nd year, generally brown, with white head and belly.	C, D, 2nd year (?), entirely dark above, white belly and dark chest band.	—
—	E, F, "Leopard stage," sub-mature.	—
3rd year, dark or mottled over back of wings.	G, young mature bird.	A 6134 (middle figure.)
4th year, and older, full white plumage with black wing tips.	H, "Snowy" phase.	A 6133 (bottom figure.)

The W.A. Museum specimen of the "Snowy" phase, a female, would not represent the final stage of white coloration reached by the species, as Murphy states that in some old males the entire body is virtually white except for the distal parts of the wings. Fleming considers that there are persistent black marks on the tail feathers. However, in this specimen the tail is entirely white.

OBSERVATIONS ON THE JOCKEY BEETLE

(*Chlamydopsis duboulayi*)

By R. P. McMILLAN, "Glendearg," Bejoording.

From early May to December, while the ground is damp, a most interesting beetle can be found in the nests of the ant, *Rhytidoponera convexa* Mayr, var. *violacea* Forel. The beetle, *Chlamydopsis duboulayi* Westw., one of the inquilines, or insects which live in ants' nests, has not been found in ants' nests, by me, during the dry season. The species is confined to the South-west and has been collected at Bunbury, Perth (King's Park), Guildford, West Midland, Speneer's Brook, Northam, Bolgart and Albany.

F. H. du Boulay collected the type specimen at Beverley.

Other species of the genus, also all inquilines, occur in the South-west and some individuals of them have also been collected by brushing off trees. Very little is known of their life history.

The appearance of *Chlamydopsis duboulayi* is as strange as its habits. Its most outstanding characteristic is that it is to be